

**GOVERNMENT OF INDIA
HEAVY INDUSTRIES AND PUBLIC ENTERPRISES
LOK SABHA**

UNSTARRED QUESTION NO:5116
ANSWERED ON:26.04.2002
LIFT IRRIGATION PROJECTS
A.P. JITHENDER REDDY

Will the Minister of HEAVY INDUSTRIES AND PUBLIC ENTERPRISES be pleased to state:

- (a) whether Bharat Heavy Electricals (BHEL) have recently designed a State Frequency Converter for use in the Lift Irrigation Projects;
- (b) if so, the details thereof;
- (c) whether the design have proved to be useful in drought affected areas;
- (d) if so, whether the Government would consider the technology in Mehboobnagar district of Andhra Pradesh which is prone to drought; and
- (e) if so, the details thereof?

Answer

MINISTER OF STATE FOR HEAVY INDUSTRIES AND PUBLIC ENTERPRISES (DR. VALLABHBHAI KATHIRIA)

(a) Yes Sir.

(b) BHEL has designed and manufactured a 4 KV, 7.5 MW Static Frequency Converter (SFC) for use in the Alimineti Madhava Reddy lift irrigation project at Srisailem Left Bank Canal at Puttamangudi, Nalgonda District of Andhra Pradesh (A.P.). The SFC is designed for sequentially starting four 18 MW, 11 KV synchronous motors. These motors drive the pumps that lift water from the Krishna River to a reservoir, from where a system of canals further distributes the water. The SFC system converts grid power supply to a variable voltage, variable frequency AC power supply to drive the motor during starting. The voltage and frequency are gradually raised till they match the grid. The Motor is then synchronized and the starting system is disconnected. It facilitates smooth starting of large capacity pump sets without any adverse impact on the electrical grid and also results in the longer life of the pump sets. The system had been installed and commissioned in September, 2001 and has been working satisfactorily.

(c) Yes Sir. The design has been proved to be useful in the Nalgonda District in Andhra Pradesh, which is a perennially drought affected area. This Static Frequency Converter was designed considering high temperatures prevalent in these areas.

(d) & (e) The Government would consider to extend the technology in Mehboobnagar district of Andhra Pradesh if and when such proposal is received from the State Government concerned.